

SHASTRINA, A NEW GENUS OF HETEROHELICID FORAMINIFERA FROM THE EOCENE OF INDIA

Richard W. Huddleston and Prabha Kalia

Abstract.—*Shastrina* Singh and Kalia, 1970 was established without a definite fixation of a type-species, and under the International Code of Zoological Nomenclature (ICZN) is unavailable with its original authors and publication date. The genus *Shastrina* is established here in compliance with the rules of the ICZN for the first time.

Singh and Kalia (1970) established the new foraminiferal genus *Shastrina* from the Eocene of India, assigning to it two species, *S. udbodhaka* Singh and Kalia, 1970 and *S. sundara* Singh and Kalia, 1970. However, neither species was designated as the type-species, nor was there any reference to a previously described form as being the type-species.

It is probable that Singh and Kalia (1970) intended *Shastrina udbodhaka* to represent the type-species of *Shastrina*. In the legend for plate 22, Singh and Kalia (1970:169) attached the formula "gen. et sp. nov." to *Shastrina udbodhaka*, while only labeling *S. sundara* with "sp. nov." The indication of "gen. nov., sp. nov." or its exact equivalent can only be accepted as a definite fixation of the type-species if applied before 1931 (ICZN, Article 68a). Singh and Kalia (1970:167) commented that "the type-species has one to two distinctly developed chambers of the uniserial stage," but at least one developed chamber in a uniserial stage can be observed in the illustrations of both *Shastrina udbodhaka* and *S. sundara* (Singh and Kalia, 1970; Pl. 22; Pl. 23).

The status of *Shastrina* is further complicated by the listing in Singh (1971:1173, table 2) of the names *Shastrina udbodhaka* gen. et sp. nov. and *S. sundara* sp. nov. Singh (1971) did not describe or define these forms, thus *Shastrina* Singh, 1971 is a *nomen nudum* (ICZN, Article 13a; p. 151). Neither *Shastrina udbodhaka* nor *S. sundara* can be given subsequent designation as type-species for *Shastrina* Singh and Kalia, 1970 to retain original authorship and date (ICZN, Article 69).

A similar taxonomic problem occurred with the foraminiferal genus *Meandrospiranella* Salaj, 1969. Salaj (1967) established *Meandrospiranella* and described two species, *M. samueli* and *M. irregularis*, but failed to designate which species was the type-species. This problem was later corrected (Salaj, 1969).

Family Heterohelicidae
Shastrina Huddleston and Kalia

Type-species.—*Shastrina udbodhaka* Singh and Kalia, 1970:167, 169; Pl. 22, fig. 3, 4; Pl. 23, fig. 7.

Diagnosis.—Diagnosis and differentiation as given in Singh and Kalia (1970:167) as follows:

“Test helicospiral, initially triserial, gradually becoming biserial and ultimately uniserial. Chambers moderately inflated, wider than long; sutures distinct, depressed, oblique in the earlier stages but straight in uniserial stage. Aperture loop-shaped with a raised border, interior-marginal in the specimens which have attained only the biserial stage, terminal and elliptical in outline in the specimens which have attained uniserial stage without any tooth or internal siphon. Wall calcareous coarsely perforate radial in microstructure; surface densely hispid.”

Acknowledgments

We thank D. Haman and W. S. Drugg, Chevron Oil Field Research Company, for their discussions and comments concerning this taxonomic study; K. Finger, Chevron Oil Field Research Company, for reading the manuscript and offering helpful comments; F. C. Huddleston for reading the manuscript. We also thank Chevron Oil Field Research company for permission to publish and financial assistance. We especially thank the late Dr. S. N. Singh who acknowledged the need for these corrections.

Literature Cited

- Salaj, J. 1969. *Meandrospiranella* nov. gen., a new mid-Triassic foraminifer from the West Carpathians, Czechoslovakia.—*Journal of Paleontology* 43(5):1294–1295.
- , A. Biely, and J. Bystricky. 1967. Trias-foraminiferen in den Westkarpaten.—*Geologické, Práce* 42:119–136.
- Singh, S. N. 1971. Planktonic foraminifera in the Eocene stratigraphy of Rajasthan, India.—*In* Farinacci, A. and R. Matteucci (Eds.), *International Conference on Planktonic Microfossils 2*. Roma, 1970, *Proceedings* Vol. 2:1169–1179.
- , and P. Kalia. 1970. *Shastrina* A new heteroheliced genus and new species of *Pseudogloborotalia* Haque and *Chiloguembelina* Loeblich and Tappan from Kirathars of Rajasthan, India.—*Indian National Science Academy, Proceedings* pt. B 36(3):166–174.

(RWH) Chevron Oil Field Research Company, P.O. Box 446, La Habra, California, U.S.A. 90631; (PK) University of Delhi, Delhi, India.